IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A ~~device data~~ transmission method for transmitting data related to a device connected to a ~~predetermined bus line~~ network through ~~the bus line~~ a connection, ~~wherein~~ comprising:

~~pieces of~~ storing connection information ~~which are connectable in the device are held at once as~~ in a predetermined table[[,]]; and

~~all or part of the pieces of~~ transmitting the stored connection information ~~in the held table are transmitted~~ to another device as [[a]] command data having ~~of~~ a predetermined format ~~through the bus line~~ via the connection; and

wherein the stored connection information has a hierarchical structure, and

wherein the stored connection information contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

2. (Currently Amended) The ~~device data~~ transmission method according to claim 1, wherein

the ~~pieces of~~ connection information held in the table ~~include~~ includes information related to a connection between an input unit and an output unit and an internal

function processing unit held by the device and information related to a format and input or output by the device.

3. (Currently Amended) The ~~device data~~ transmission method according to claim 2, wherein

the information held in the table and related to the connection between the input unit or the output unit and the function processing unit includes information related to ~~a fact that the same data can be transmitted~~ transmitting the said data by a plurality of connections at once.

4. (Currently Amended) The ~~device data~~ transmission method according to claim 2, wherein

the ~~pieces of~~ connection information held in the table further ~~include~~ includes information related to a function of converting a format for inputting and outputting into another format.

5. (Currently Amended) The ~~device data~~ transmission method according to claim 2, wherein

an input unit or an output unit indicated by information held in the table include units ~~except for~~ excluding an input unit or an output unit connected to the bus line.

6. (Currently Amended) The ~~device data~~ transmission method according to claim 2, wherein

information related to a present connection state in the device is transmitted to another device by transmission of the command data of a predetermined format.

7. (Currently Amended) The ~~device data~~ transmission method according to claim 6, wherein,

when a present connection state is changed, ~~if another connection is influenced,~~ information related to the change in the present connection state is further transmitted.

8. (Currently Amended) A ~~device data~~ transmission method for transmitting data related a first device connected to a ~~predetermined bus line~~ network to a second device through ~~the bus line~~ a connection, ~~wherein~~ comprising:

data for designating an input of an output unit or an internal function processing unit held by the first device is transmitted from the second device by a command of a predetermined format,

~~so~~ such that data related to a status of connection between two units of the corresponding input unit, output unit, and internal function processing unit of the first device is transmitted to the second device,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

9. (Currently Amended) The ~~device data~~ transmission method according to claim 8, wherein

data for designating the input unit held by the first device is transmitted to the second device.

10. (Currently Amended) A ~~device data~~ transmission method for transmitting data related to a first device connected to a ~~predetermined bus line~~ network to a second device through ~~the bus line~~ a connection, ~~wherein~~ comprising:

data for designating an output unit or an internal function processing unit held by the first device is transmitted from the second device by a command of a predetermined format,

~~so~~ such that data for specifying a signal source of the data transmitted by the corresponding connection is transmitted to the second device,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

11. (Currently Amended) The ~~device data~~ transmission method according to claim 10, wherein

when a plurality of signal sources exist, data related to the plurality of signal sources is transmitted.

12. (Currently Amended) The ~~device data~~ transmission method according to claim 10, wherein

data representing that a plurality of signal sources exist is transmitted.

13. (Currently Amended) The ~~device data~~ transmission method according to claim 8, wherein

data for designating the input unit or the output unit and the function processing unit has a data structure equal to that of data used when a setting related to a connection between the input unit or the output unit and the function processing unit is performed.

14. (Currently Amended) A ~~device data~~ transmission method for transmitting data related to a predetermined device connected to a ~~predetermined bus line~~ network to another device through ~~the bus line~~ a connection, ~~wherein~~ comprising:

data related to an output state of a video image from a specific output unit of the predetermined device is output from the predetermined device,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

15. (Currently Amended) The ~~device data~~ transmission method according to claim 14, wherein

to the data related to the output state of the video image, a flag representing that a specific video image is superposed on the video image is added.

16. (Currently Amended) A ~~device data~~ transmission method according to claim 15, wherein

the specific video image represented by the flag is a video image of an on-screen display.

17. (Currently Amended) The ~~device data~~ transmission method according to claim 14, wherein

a processing state of the video image is represented by the specific field of data related to an output state of the video image.

18. (Currently Amended) The ~~device data~~ transmission method according to claim 17, wherein

a processing state of the video image is represented by using a flag.

19. (Currently Amended) The ~~device data~~ transmission method according to claim 17, wherein

a processing state represented by data in the specific field is data representing a state that predetermined data is extracted from multiplexed video data.

20. (Currently Amended) The ~~device data~~ transmission method according to claim 17, wherein

a processing state represented by data in the specific field is data representing a state of an on-screen display for displaying data on which a video image is superposed.

21. (Currently Amended) The ~~device data~~ transmission according to claim 17, wherein

a processing state represented by data in the specific field is data representing a state that a signal format of video data is converted.

22. (Currently Amended) The ~~device data~~ transmission method according to claim 17, wherein

a processing state represented by data in a specific field is data representing a state that a special process is performed to a video image.

23. (Currently Amended) The ~~device data~~ transmission method according to claim 22, wherein

the state that a special process represented by data in a specific field is performed is a state that video images mixed.

24. (Currently Amended) The ~~device data~~ transmission method according to claim 17, wherein

a processing state represented by data in the specific field is data representing a state that the same video image as that of a signal source is set.

25. (Currently Amended) A transmission device which can be connected to another device through a ~~predetermined bus line~~ network connection, comprising[[,]]:

storage means for holding ~~pieces of~~ connection information which are connectable in the device at once as a predetermined table; and

transmission control means for transmitting part or all of the ~~pieces of~~ connection information stored by the storage means to the ~~bus line~~ connection on the basis of a command of a predetermined format received through the ~~bus line~~ connection,

wherein the connection information has a hierarchical structure, and

wherein the connection information contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

26. (Currently Amended) The transmission device according to claim 25, wherein

the ~~pieces of~~ connection information held in the storage means include information related to a connection between an input unit or an output unit and an internal function processing unit held by the device and information related to a format and input or output by the device.

27. (Currently Amended) The transmission device according to claim 26, wherein

information related to a connection between an input unit or an output unit and a function processing unit held by the storage means and includes information related to ~~a fact that the same data can be transmitted~~ transmitting the said data by a plurality of connections at once.

28. (Currently Amended) The transmission device according to claim 26, wherein

~~pieces of~~ connection information held in the storage means further include information related to a function of converting the format for inputting and outputting into another format.

29. (Currently Amended) The transmission device according to claim 26, wherein

an input unit or an output unit represented by information held in the storage means includes a unit ~~except for~~ excluding an input unit or an output unit connected to the bus line.

30. (Currently Amended) The transmission device according to claim 26, wherein

the transmission control means transmits information related to a present connection state in the device to another device by transmission of a command data of a predetermined format.

31. (Currently Amended) The transmission device according to claim 30, wherein

when a present connection state is changed; ~~if another connection is influenced,~~ the information transmitted by the transmission control means includes information related to the change in the present connection state.

32. (Currently Amended) A transmission device which can be connected to another device through a ~~predetermined bus line~~ network connection, comprising:

transmission control means for, when data for designating an input of an output unit held by the device or an internal function processing unit is received through the ~~bus line~~ connection, transmitting data related to a status of connection between two units of the corresponding input unit, output unit, and internal function processing unit,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

33. (Currently Amended) The transmission device according to claim 32, wherein

the transmission control means transmits data for designating an input unit held by the device to the ~~bus line~~ connection.

34. (Currently Amended) A transmission device which can be connected to another device through a ~~predetermined bus line~~ network connection, comprising:

transmission control means for, when data for specifying a signal source of an input of an output unit or an internal function processing unit held by the device is received through the ~~bus line~~ connection, transmitting the data for specifying the signal source to the ~~bus line~~ connection,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

35. (Original) The transmission device according to claim 34, wherein

when a plurality of signal sources exist, the transmission control means transmit data related to the plurality of signal sources.

36. (Original) The transmission device according to claim 34, wherein

when a plurality of signal sources exist, the transmission control means transmit data representing that the number of signal sources is plural.

37. (Currently Amended) A transmission device ~~which can~~ adapted to be connected to another device through a ~~predetermined bus line~~ network connection, comprising:

transmission control means for transmitting data related an output state of video data from an output unit held by the device to the ~~bus line~~ connection,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

38. (Original) The transmission device according to claim 37, wherein the transmission control means adds a flag representing that a specific video data is superposed on a video data.

39. (Original) The transmission device according to claim 38, wherein the specific video data represented by a flag added by the transmission control means is video data of an on-screen display.

40. (Original) The transmission device according to claim 37, wherein the transmission control means arranges data representing a processing state of a video image in a specific field of data related to an output state of a video image.

41. (Original) The transmission device according to claim 40, wherein the data in the specific field arranged by the transmission control means is data representing a state that predetermined data is extracted from multiplexed video data.

42. (Original) The transmission device according to claim 40, wherein the data in the specific field arranged by the transmission control means is data representing the state of an on-screen display for displaying a superposed video image.

43. (Original) The transmission device according to claim 40, wherein the data in the specific field arranged by the transmission control means is data representing a state that a signal format of video data is converted.

44. (Original) The transmission device according to claim 40, wherein the data in the specific field arranged by the transmission control means is data representing a state that a special process is performed to the video image.

45. (Original) The transmission device according to claim 44, wherein the state that the special process represented by the data in the specific field arranged by the transmission control means is performed is a state that video images are mixed.

46. (Original) The transmission device according to claim 40, wherein the data in the specific field arranged by the transmission control means is data representing that a state of the output video image is just equal to that of the video image of the signal source.

47. (Currently Amended) A transmission system in which a first device and a second device are connected to each other through a ~~predetermined bus line~~ network connection, comprising:

~~as the first device,~~ storage means for ~~holding pieces of~~ storing connection information ~~which are connectable in~~ of the first device ~~at once as~~ in a predetermined table[[,]]; and

transmission control means for transmitting part or all of the ~~pieces of~~ connection information stored by the storage means as a command of a predetermined format which is received through the ~~bus line~~ connection; and

~~as the second device,~~ connection determination means for determining the ~~pieces of~~ connection information in the first device on the basis of data transmitted to the ~~bus line~~ connection,

wherein the connection information has a hierarchical structure, and

wherein the connection information contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

48. (Currently Amended) The transmission system according to claim 47, wherein

the ~~pieces of~~ connection information held in the storage means of the first device ~~include~~ includes information related to a connection between an input unit or an output unit and

an internal function processing unit held by the first device and information related to a format and input or output by the first device,

~~so~~ such that the second device can determine ~~these pieces of~~ the connection information.

49. (Currently Amended) The transmission system according to claim 48, wherein

the information held in the storage means of the first device and related to the connection between the input unit or the output unit and the function processing unit includes information related to ~~a fact that the same data can be transmitted~~ transmitting the said data by a plurality of connections at once,

~~so~~ such that the second device can determine ~~these pieces of~~ the connection information.

50. (Currently Amended) The transmission system according to claim 48, wherein

the ~~pieces of~~ connection information held in the storage means of the first device further ~~include~~ includes information related to a function of converting a format for inputting and outputting into another format,

~~so~~ such that the second device can determine ~~these pieces of~~ the connection information.

51. (Currently Amended) The transmission system according claim 48, wherein

an input unit or an output unit represented by the ~~pieces of~~ connection information held in the storage means of the first device includes a unit ~~except for~~ excluding an input unit or an output unit connected to the ~~bus line~~ network connection,

~~so~~ such that the second device determines ~~these pieces of~~ the connection information.

52. (Currently Amended) The transmission system according to claim 48, wherein

the transmission control means of the first device transmits information related to a present connection state in the first device to the second device by transmitting [[a]] command data of a predetermined format.

53. (Currently Amended) The transmission system according to claim 52, wherein

when the present connection state is changed, ~~if another connection is influenced,~~ information transmitted by the transmission control means of the first device includes information related to the change in the present connection state,

~~so~~ such that the second device can determine the change in the present connection state.

54. (Currently Amended) A transmission system in which a first device and a second device are connected to each other through a ~~predetermined bus line~~ network connection, comprising:

~~as the first device,~~ transmission control means for, when data for designating an input of an output unit held by the first device or an internal function processing unit is received through the ~~bus line~~ connection, transmitting data related to statuses of connection between two units of the corresponding input unit, output unit, and internal function processing unit to the ~~bus line~~ connection; and

~~as the second device,~~ connection determination means for determining ~~pieces of~~ the connection information in the first device on the basis of data transmitted to the ~~bus line~~ connection,

wherein the connection information has a hierarchical structure, and

wherein the connection information contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

55. (Currently Amended) The transmission system according to claim 54, wherein

the transmission control means of the first device transmits data for designating an input unit held by the device to the ~~bus line~~ network connection, and

the connection determination means of the second device determines that the data is transmitted to the ~~bus line~~ connection.

56. (Currently Amended) A transmission system in which a first device and a second device are connected to each other through a ~~predetermined bus line~~ network connection, comprising:

~~as the first device,~~ transmission control means for, when data for specifying a signal source of an input of an output unit held by the first device or an internal function processing unit is received through the ~~bus line~~ connection, transmitting the data for specifying the signal source to the ~~bus line~~ connection; and

~~as the second device,~~ connection determination means for specifying a signal source on the basis of data transmitted from the first device,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

57. (Original) The transmission system according to claim 56, wherein

when a plurality of signal sources exist, the transmission control means of the first device transmits data related to the plurality of signal sources, and

the connection determination means of the second device determines the plurality of signal sources.

58. (Original) The transmission system according to claim 56, wherein

when a plurality of signal sources exist, the transmission control means of the first device transmits data representing that the number of signal sources is plural, and

the connection determination means of the second device determines that the number of signal sources is plural.

59. (Currently Amended) A transmission system in which a first device and a second device are connected to each other through a ~~predetermined bus line~~ network connection, comprising:

~~as the first device,~~ transmission control means for transmitting data related to an output state of video data from an output unit held by the first device to the ~~bus line~~ connection; and

~~as the second device,~~ state determination means for determining the output state on the basis of data transmitted from the first device,

wherein the data has a hierarchical structure, and

wherein the data contains a unit identifier descriptor representing all data, a source descriptor representing a list of transmission sources, a destination descriptor representing a list of receivers, and a transformation descriptor representing a list of signal conversions.

60. (Original) The transmission system according claim 59, wherein

the transmission control means of the first device adds a flag representing that a specific video data is superposed on a video data, and

the state determination means of the second device determines on the basis of the flag that the specific video data is superposed on the video data.

61. (Original) The transmission system according to claim 60, wherein

the specific video data represented by the flag added by the transmission control means of the first device is video data of an on-screen display, and

the state determination means of the second device determines that the specific video data is the video data of the on-screen display on the basis of the flag.

62. (Original) The transmission system according to claim 59, wherein

the transmission control means of the first device arranges data representing a processing state of a video image in a specific field of data related to an output state of a video image, and

the state determination means of the second device determines the processing state of the video image.

63. (Original) The transmission system according to claim 62, wherein

the data in the specific field arranged by the transmission control means of the first device is data representing a state that predetermined data is extracted from multiplexed video data, and

the state determination means of the second device determines a state that the predetermined data is extracted from the multiplexed video data.

64. (Original) The transmission system according to claim 62, wherein

the data in the specific field arranged by the transmission control means of the first device is data representing a state of an on-screen display for displaying a superposed video image, and

the state determination means of the second device determines the state of the on-screen display.

65. (Original) The transmission system according to claim 62, wherein,

the data in the specific field arranged by the transmission control means of the first device is data representing a state that a signal format of video data is converted, and

the state determination means of the second device determines a state that the signal format of the video data is converted.

66. (Original) The transmission system according to claim 62, wherein

the data in the specific field arranged by the transmission control means of the first device is data representing a state that a special process is performed to a video image, and

the state determination means of the second device determines the state that the special process is performed to the video image.

67. (Original) The transmission system according to claim 66, wherein

the state that a special process represented by the data in the specific field arranged by the transmission control means of the first device is performed is a state that video images are mixed, and

the state determination means of the second device determines the state that the video images are mixed.

68. (Original) The transmission system according to claim 62, wherein

the data in the specific field arranged by the transmission control means of the first device is data representing that a state of the output video image is just equal to that of a video image of a signal source, and

the state determination means of the second device determines that the output video image is just equal to the video image of the signal source.